

**METHOD FOR ASSIGNING DYNAMIC
IDENTIFIER TO ELECTRONIC DEVICE
AND DEVICE THEREOF**

**CROSS-REFERENCE TO RELATED
APPLICATION**

[0001] This application claims priority from Indian Patent Application No. 3330/DEL/2015, filed on Oct. 15, 2015 in the Indian Patent Office, the entire disclosure of which is incorporated herein by reference.

BACKGROUND

[0002] 1. Field

[0003] Methods and apparatuses consistent with exemplary embodiment relate to contents and services sharing in communication systems.

[0004] 2. Description of Related Art

[0005] With the advent of smart devices and the Internet of things (IOT), more devices are interconnected with each other and the propagation of information is as easy and effortless as ever. Wi-Fi standards, which have been a major guiding influence on similar wireless technologies such as Bluetooth, Near Field Communication (NFC), etc., have empowered smart devices to create ad-hoc networks as well as to use the conventional methods of connecting with existing local area networks (LAN), wide area networks (WAN), and the Internet.

[0006] In a quest to meet the contemporary demands and, at the same time, usher in the new era of communication technologies, the Wi-Fi standards have introduced new concepts and features, notably “Wireless Multimedia Extensions,” “Wi-Fi Protected Setup,” “Wi-Fi Passpoint,” “WiGig CERTIFIED,” “WiFi Direct,” and “WiFi Miracast.”

[0007] Traditionally, the Wi-Fi standards have mainly worked upon peer-to-peer content streaming/sharing (e.g., WiFi Miracast, WiFi Direct, etc.). These concepts utilize the already existing Wi-Fi infrastructure. There are independent programs which have implemented the content streaming with their own protocols and applications. The Wi-Fi standards themselves are not rigid to the definition of their existing peer content streaming/sharing. Indeed, they have now extended the definition to encompass multi-connections as well as the conventional peer arrangement.

[0008] The user requirement and enhancement of the existing Wi-Fi feature set insinuates that in a near future there will be multi-connection options. This means the content and data will be available for sharing with other devices. Infrastructure-wise, there is no limitation to implementing these multi-connect options.

[0009] Broadcasting information to nearby clients is increasingly becoming an essential feature at public places. At airports, markets, etc., there will be more and more information being broadcast (e.g., flight schedule, market map, etc.). As information broadcasting becomes more prevalent, filtering to find the relevant information provider may be inconvenient for the user.

[0010] However, in a wireless environment when there is no connection between host and client, only broadcasted device names are observed by the client in available device list. Before a connection is established between a host and client wireless devices, there are some protocol-based steps which have to be followed for any meaningful communication could start. But until then, no information may be

communicated between the host and the clients—including information about what service/content the host wireless device is currently offering.

[0011] Thus, with the current technology, when a user enters an area where there are devices offering some service or content via Wi-Fi, Wi-Fi Direct, Bluetooth, etc., the user will only be able to see some static device names with no information about what is offered or shared by the available devices. Thus, the content or service is discovered only after the establishment of a connection.

[0012] Presently, there is no information available about what is being offered by the hosts, and the average time it takes to search and connect to the desired host is long. For example, if the user wants to connect to a host that provides Internet connectivity, and if there are a larger number of devices (e.g., access points), only one or few of which are providing the desired service/data, the process of connecting to the right host becomes a cumbersome task with regard to time and ease. For instance, in a real life scenario where there is N number of devices available in the proximity of a client with which this client can connect, it may take N number of attempts by the client to know what is being played or shared by all the available host devices. Now, as the number of available devices increases, at user level this becomes very cumbersome and the long list of available devices may frustrate the user and may cause the user to lose interest in using the services offered by the hosts.

[0013] Thus, it is desirable to be able to discover the content or service being offered before the establishment of a connection. Such technology can be potentially beneficial as the market for proximity-based, social networking applications, IOT, etc. continues to grow. The urgency in this field can be sensed from the fact that the Wi-Fi alliance has proposed WiFi Aware certification program, which requires content/service discovery prior to connection.

SUMMARY

[0014] One or more exemplary embodiments provide a device and a method for dynamically assigning an identifier to an electronic device or a connection offered by the device.

[0015] According to an aspect of an exemplary embodiment, there is provided a method for implementation by an electronic device that forms part of a communication system and is configured to share content or service(s) with at least one additional device. The method may include assigning an identifier to one of an electronic device and a connection offered by the electronic device, based on at least one of: content offered by the electronic device, a service offered by the electronic device, and an application running on the electronic device. The method may further include transmitting, by the electronic device, discovery information to at least one additional device, the discovery information including the identifier of one of the electronic device and the connection offered by the electronic device.

[0016] According to an aspect of another exemplary embodiment, the electronic device may detect at least one of: content information pertaining to content being offered by the electronic device, service information pertaining to a service being offered by the electronic device, and application information pertaining to an application running on the electronic device. Based on at least one of the content information, the service information, and the application information, an identifier is provided to the electronic device or a connection offered by the electronic device.